U.S. Environmental Protection Agency
Great Lakes National Program Office (GLNPO)
Significant Activities Report

On the Web at:
www.epa.gov/greatlakes

June 2005

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FY2005 Funding Guidance

GLNPO issued its annual request for Great Lakes project submissions through the USEPA Great Lakes National Program Office FY2005-2006 Funding Guidance on April 12th. By the May 31st due date, applicants had submitted 211 proposals totaling $22.7 million (http://www.epa.gov/greatlakes/fund/2005guid/idlist.html). GLNPO announced its selection of projects totaling about $3 million on June 28th (http://www.epa.gov/greatlakes/fund/2005fund/yeslist.html).

Projects were selected in the following topic areas:

- Pollution Prevention and Toxics Reduction: 10 totaling $422,205
- Habitat (Ecological) Protection and Restoration: 7 totaling $467,925
- Habitat Conferences: 11 totaling $53,000
- Emerging or Strategic Issues (including Invasive Species): 1 totaling $128,478, others are on hold until October, pending a determination of Lake Guardian funding needs.
- Remedial Action Plan Priorities: 13 totaling $1,396,828
- Lakewide Management Plan Priorities: 10 totaling $538,486

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Black Lagoon Cleanup Enters Final Phase

The final phase of dredging began on June 29th. An additional 15,000 cubic yards of contaminated sediment is slated for removal as part of this phase of the Black Lagoon

Black Lagoon cleanup underway (note the effectiveness of the silt-curtains in containing sediment that was resuspended by the dredging process)

Legacy Act project. The sediment will be dredged with an environmental bucket and transported by truck to the Pointe Mouille Confined Disposal Facility. Following completion of the dredging in August, a layer of sand and stone will be placed over the lagoon to cover any remaining residual contamination.

The Black Lagoon is located in the Trenton Channel of the Detroit River near Trenton, Michigan. Contaminated sediment in the lagoon is a source of pollution to the Detroit River and ultimately Lake Erie. The cleanup will remove sediments contaminated with mercury, PCBs, oil and grease, lead and zinc from the bottom of the lagoon. See http://www.epa.gov/greatlakes/sediment/legacy/blklagoon/index.html for additional information.

The Black Lagoon cleanup is the first sediment remediation project undertaken under the authority and funding of the Legacy Act of 2002. The purpose of the Legacy Act is to help accelerate sediment cleanups in Great Lakes Areas of Concern. Eligible projects under the Legacy Act are funded 65% by the federal government and 35% by a non-federal sponsor. More information about the Legacy Act is available online at: http://www.epa.gov/greatlakes/sediment/legacy/index.html

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Lake Michigan Spring Toxics Survey

The Spring survey for organic contaminants and mercury took place from May 27th through June 3rd. In an effort to provide additional data in support of modeling contaminants in Lake Michigan, a number of stations that were part of the Lake Michigan Mass Balance Study were resampled in this year's survey. These included nearshore and open water stations. Air samples, to be analyzed for the same contaminants, were taken at a number of sites, including some near large metropolitan areas, which often exhibit elevated contaminant levels in air. Samples were analyzed for a number of contaminants, including PCBs, PBDEs, atrazine, and mercury.

Persistent bioaccumulative toxic (PBT) substances may increase the risk of cancer, birth defects and neurological and developmental problems through long-term, low-level exposure. GLNPO has been collecting data on PBT substances in air and fish since 1990 and 1970, respectively. Data documenting PBT concentrations in the open water is needed as well to accurately estimate the net amount of PBTs entering the lakes from the air and to determine how elevated fish tissue levels relate to the PBT levels in the water. USEPA monitored these contaminants in the water in the mid-1990s and monitoring for Lake Michigan began again in 2003. USEPA and Dr. Matt Simcik of the University of Minnesota are cooperating on this project.

The following chemicals are being measured in water samples collected from eight locations in Lake Michigan:

- Polychlorinated biphenyls (PCBs);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Organochlorine pesticides including DDT and toxaphene;
- Dioxins and Furans;
- Mercury and Methylmercury;
- Polybrominated diphenyl ethers (PBDEs), which are used as flame retardants in furniture and electronic equipment;
- Perfluoroocatane sulfonate (PFOS) and Perfluoroocatonic acid (PFOA), a main ingredient and a breakdown product from stain repellants commonly applied to clothing.

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Binational Toxics Strategy in the News

Two articles summarizing results from the Great Lakes Binational Toxics Strategy's 2004 Annual Report, appeared recently:

- An article in the National Review Online (http://www.nationalreview.com/comment/mehan200505310953.asp), and
- An article also appeared in the Heartland Institutive (http://www.heartland.org/Article.cfm?artId=17347).

Both articles were authored by G. Tracey Mehan, former USEPA Assistant Administrator for Water, and were complimentary of the accomplishments achieved by the Great Lakes Binational Toxics Strategy effort. The 2004 Annual Report and additional information about the Great Lakes Binational Toxics Strategy can be found at: http://www.epa.gov/greatlakes/bns/index.html

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2005 IJC Biennial Meeting

Benjamin H. Grumbles, USEPA Assistant Administrator for Water spoke at the International Joint Commission's 2005 Great lakes Conference and Biennial meeting on June 11th at Queens University in Kingston, Ontario. Grumbles discussed the Great Lakes Executive Order, which created the Great Lakes Interagency Task Force and called for the Great Lakes Regional Collaboration. The Great Lakes Regional Collaboration is developing a Strategy that will enhance and support the work with Canada under the Great Lakes Water Quality Agreement. He also discussed the goals and status of both efforts.

IJC Logo

(Contact: Vicki Thomas, 312-886-6942, thomas.vicki@epa.gov)

Fish Monitoring Program Review Published

The final report from the program review of the Great Lakes fish monitoring program was released on June 15th. The review, which took place on February 7th and 8th of this year, covered the program's sampling, chemical parameters, data and information availability. The final report contains numerous comments and recommendations, many of which will be implemented in the future. The document is available online at: http://www.epa.gov/glnpo/glindicators/fishtoxics/GLFMP%20Review%20Document%206.14.05.pdf

(Contact: Elizabeth Murphy, 312-353-4227, murphy.elizabeth@epa.gov)

Hog Island/Newton Creek Cleanup Begins

The second Legacy Program project began at the Hog Island Inlet site (part of the St. Louis River Area of Concern) in Superior, Wisconsin. USEPA and the Wisconsin Department of Natural Resources signed a Project Agreement on June 13th and project work began the following week.

The project calls for removal of contaminated sediment from the final part of Newton Creek – before it reaches Hog Island Inlet – as well as the inlet itself. During the cleanup, the flow of the creek will be diverted. Water in the inlet will be diverted to the St. Louis River or to the city of Superior's wastewater treatment facility.

The sediment being removed is contaminated with polynuclear aromatic hydrocarbons, or PAHs, as well as heavy metals. The dredged sediment will be taken to a licensed landfill.

Once the contaminated sediment is removed, the creek bed will be restored with clean river rock. The creek banks will be stabilized, with foliage and shrubbery planted to prevent erosion and improve the appearance of the area. The near bank of Hog Island Inlet will also be restored to prevent erosion.

When the cleanup is finished, USEPA and Wisconsin DNR will monitor Newton Creek and Hog Island Inlet to ensure the cleanup is effective.

Approximately 40,000 cubic yards of contaminated sediments are slated for removal in the project that is estimated to cost $6.3 million. The Wisconsin Department of Natural Resources, the non-federal sponsor for the project will pay 35% of the cost.

Location of the Hog Island Project Area

A public meeting was held on June 29th to inform the community about the status and timetable of the project.

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Ruddiman Creek Cleanup Public Meeting

A public meeting was held in Muskegon, Michigan on June 21st to inform the community about the proposed Legacy Act Ruddiman Creek sediment clean-up project. The Creek is contaminated with PCBs, PAHs, and metals. Under the proposed plan, approximately 80,000 cubic yards of contaminated material would be dredged from the Creek and pond and transported to the local landfill. The community was given an opportunity to ask questions about the proposed plan, and the overall response to the

project was positive. It is anticipated that once a Project Agreement is signed with the Michigan Department of Environmental Quality, the work can begin in August. The approximate cost for the project is $10.6 million of which 35% will be paid for by the State as the non-federal sponsor.

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Mudpuppy Sampling

On June 7th to 9th, GLNPO's *R/V Mudpuppy* was in East Chicago, Indiana to collect sediment cores in Indiana Harbor in support of the U.S. Army Corps of Engineers. The *Mudpuppy* crew collected 250 gallons of sediments containing PAHs, oil and grease, and heavy metals. The sediments were shipped to the Corps' research laboratory in Vicksburg, Mississippi for evaluation of methods to reduce losses of volatile and semi-volatile contaminants during dredging and disposal of Indiana Harbor sediments, including the addition of activated carbon to the dredge slurry to bind the organic contaminants.

Then the *Mudpuppy* was on to Saginaw, Michigan, where it supported the Michigan Department of Environmental Quality in sampling the Saginaw River from June 14th to 17th. The Mudpuppy was to collect a series of sediment core samples to be tested for polychlorinated naphthalene (PCN) and dioxin.. There were two objectives for this sampling:

1. To understand the micro-distribution of dioxin in sediments, both vertically and horizontally; and
2. To understand Saginaw River PCN concentrations at upstream, midstream, and downstream locations.

Because of heavy rain during the time of the survey, the Saginaw River experienced high water levels and flows, and the *Mudpuppy* was only able to collect two core samples and one ponar grab sample for PCN. No dioxin samples were obtained. The Michigan Department of Environmental Quality plans to obtain the remaining samples on a later date.

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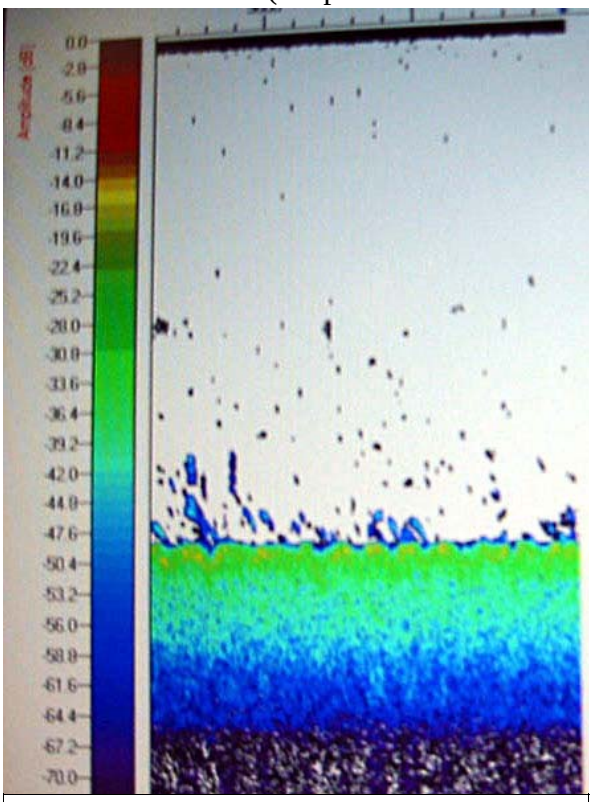
Lake Guardian Continues Lake Erie Study Support

The *R/V Lake Guardian* is continuing its support of the NOAA-funded study of Lake Erie. The ship is currently surveying the central basin of the lake, using acoustic sensors to detect fish populations and towed instrument packages which measure parts of the lower food web (zooplankton and



Output graph from fish acoustics study sensor (Photo courtesy of NOAA-GLERL)

phytoplankton). These measurements are made within and outside the areas of the lake where the "Dead Zone" develops, to see how that phenomenon influences the lake's food web.

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National Librarians Conference

The American Librarians Association held its 2005 Conference in Chicago, Illinois from June 23rd to 29th. USEPA had a display booth jointly sponsored by GLNPO and Region 5's Office of Public Affairs' Environmental Education program. GLNPO's Susan Boehme and Frank Anscombe helped to staff the booth and Barry Manne prepared computers for service at the conference. The booth was "constantly busy" (over Saturday and Sunday, too): over 600 copies of the ***Great Lakes Atlas*** were distributed and over 400 "swipes" with ID-cards were made requesting a package to be mailed which includes the ***Great Lakes Atlas***.

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Wind Energy and Wildlife

A number of wind power projects have been proposed for the Great Lakes basin, including a project near Horicon Marsh in Wisconsin as well as the islands in the western Lake Erie Basin. Wrongly placed, wind turbines cause major avian and wildlife carnage and yet little data exists regarding the impacts of wind energy on migrating wildlife. The Great Lakes Basin Ecosystem Team (GLBET) of the U.S. Fish and Wildlife Service identified this issue as its top priority at its December 2004 meeting in Chicago; and consequently, a GLNPO-GLBET wind power team emerged as the

A "wind farm" of electric-generating wind turbines (Photo courtesy of Department of Energy)

coordinating body for the basin, and began convening the experts on this important issue. Momentum continued to build, and two projects rose to the top of the Steering Committee's list for immediate 'value-added' activities:

1. A habitat project at Neda Mine in Wisconsin, one of the largest known bat hibernation areas in the Midwest located near the proposed wind power farm at Horicon Marsh, which would develop decision-making tools to minimize damage to wildlife when siting wind farms by utilizing state-of-the-art technology; and
2. A conference, proposed for Spring of 2006, at the Maumee Area of Concern, which would share these new tools with experts and decision makers, hone them based upon feedback, and eventually apply them to the Lake Erie Basin. This would result in the development of a Lake Erie Basin map identifying areas of "low-risk" to migratory species. The purpose of the collaborative effort between GLNPO and the U.S. Fish and Wildlife Service is to inform the discussion, supplying future decision-makers with the information necessary to effectively evaluate migratory species concerns when making wind power siting

decisions.

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Reducing Mercury Releases from Artisanal Mining

GLNPO's Frank Anscombe attended an international multi-stakeholder meeting convened by the World Bank, the United Nations Industrial Development Organization (UNIDO), and USEPA on June 15th in Washington, DC to discuss opportunities to improve mercury management among artisanal gold miners. This is part of a U.S. commitment to encourage practical actions, on an international scale, to reduce releases of mercury to the environment. The meeting was attended by 61 people, including representatives from Brazil, Burkina Faso, Cameroon, Guiana, South Africa, Suriname, and Tanzania.

The Gold Institute has estimated artisanal miners produce 1,000 tons of gold per year. Millions of miners are active in 55 countries across Asia, Africa, and Latin America. They employ mercury to bind with gold or silver within ores, yielding long-term local contamination of soils and rivers. In addition, miners heat the gold/mercury amalgam over fires, volatilizing away mercury and liberating the gold that they seek. If miners emit as much mercury to air as they reap gold (a conservative assumption), they would collectively emit 1,000 tons/year of mercury to the atmosphere. This would constitute a relatively large anthropogenic source of mercury vapor to the atmosphere, even though this source has usually not been included in estimates of global mercury emissions.

An artisanal gold miner in Guinea digs in subsoil (Photo courtesy of USAID)

The UNIDO has projects to promote cleaner artisanal mining practices in six nations (Brazil, Indonesia, Laos, Sudan, Tanzania, and Zimbabwe). Miners can craft retorts from available materials to capture mercury vapor, and employ more efficient processes. The Swiss government's Agency for Development and Cooperation sponsors a project to reduce mercury losses within several mining communities in Peru. In addition, the French and Dutch governments are sponsoring work by the World Wildlife Fund to collaborate with miners in Guiana and Surinam. A U.S. non-governmental organization, Blacksmith Institute, is working with miners in Mozambique. The World Bank's Communities and Small-scale Mining program issues small grants and provides a forum for diverse artisanal mining topics.

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Carp Barrier Update

The Aquatic Nuisance Species Dispersal Barrier Panel met at the U.S. Army Corps of Engineers Chicago District offices on June 23rd. An update on the status and operation of Barrier I indicated that there no maintenance problems with the barrier or

any new failures/deteriorations of existing cables and that a barge safety survey was recently completed. An update of the status of Barrier II indicated that the underwater work should be completed in August and that the goal for phase 2 of Barrier II construction is September of this year. The monitoring of tagged fish near Barrier I indicate that there have been no crossings and that carp typically test the barrier for a week or two before moving downstream to better habitat.

More information on Asian Carp and the Dispersal Barrier is available online at: http://www.epa.gov/greatlakes/invasive/asiancarp/

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Upcoming Events

2005

Public Meetings on Great Lakes Regional Collaboration Draft "Strategy to Restore and Protect the Great Lakes":	
July 28th	Gary, Indiana
August 1st	Grand Rapids, Michigan
August 4th	Superior, Wisconsin
August 18th	Detroit, Michigan
August 23rd	Cleveland, Ohio
August 30th	Buffalo, New York
September 15th	Great Lakes Binational Toxics Strategy Integration Workgroup, Chicago, Illinois
November 2nd-4th	State of Lake Michigan Conference, Green Bay, Wisconsin
December 6th-7th	Great Lakes Binational Toxics Strategy Stakeholder Forum and Integration Workgroup, Chicago, Illinois
December 12th	Great Lakes Regional Collaboration Summit II, Chicago, Illinois

We welcome your questions, comments or suggestions about this month's Significant Activities Report. To be added to or removed from the Email distribution of the Significant Activities Report, please contact Tony Kizlauskas, 312-353-8773, kizlauskas.anthony@epa.gov.